

# SEARCH REQUEST FORM

## Scientific and Technical Information Center

Requester's Full Name: Carrie Thompson Examiner #: 79244 Date: 8/24/04  
Art Unit: 174 Phone Number 30 511 272-1530 Serial Number: 09/830 897  
Mail Box and Bldg/Room Location: 10128 Results Format Preferred (circle): PAPER  DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Electroluminescent Materials

Inventors (please provide full names): Poopathy Kathirgo manathan

Earliest Priority Filing Date: 11/02/1998

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please do a search on claim 6

$\text{Eu}(\text{II}) (\text{TMHD})_2$

$\text{Eu}(\text{II}) (\text{tris}(2,2,6,6-\text{tetramethyl-3,5-heptanedionate})_2$

Thanks,

C

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**STAFF USE ONLY**  
Searcher: EL  
Searcher Phone #: \_\_\_\_\_  
Searcher Location: \_\_\_\_\_  
Date Searcher Picked Up: \_\_\_\_\_  
Date Completed: 8-27-04  
Searcher Prep & Review Time: 5  
Clerical Prep Time: \_\_\_\_\_  
Online Time: 60

Type of Search	Vendors and cost where applicable
NA Sequence (#)	STN <u>\$ 384.14</u>
AA Sequence (#)	Dialog _____
Structure (#)	Questel/Orbit _____
Bibliographic	Dr.Link _____
Litigation	Lexis/Nexis _____
Fulltext	Sequence Systems _____
Patent Family	WWW/Internet _____
Other	Other (specify) _____

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Cancelled) /
2. (Cancelled) /
3. (Cancelled) /
4. (Cancelled) /
5. (Cancelled) /

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6. (Currently Amended) An electroluminescent compound having the formula according to claim 1 Eu(II)(TMHD)<sub>2</sub>.
7. (Currently Amended) A composition which comprises an inert polymer and from 5% to 95% by weight of an electroluminescent compound as claimed in claim + 7.
8. (Previously Amended) An electroluminescent device which comprises (i) a transparent substrate (ii) an electroluminescent layer an electroluminescent compound which comprises an organic complex of a metal selected from transition metals, lanthanides and actinides the group consisting of thorium (IV), yttrium (III), gadolinium (III), europium (II), terbium (III), cerium (III), cerium (IV) and mixtures thereof and an organic ligand which electroluminescent compound emits light in the blue or purplish blue spectrum when an electric current is passed through it and in which the organic ligand has the formula

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=> d his

FILE 'HCAPLUS'  
L1 107 S KATHIRGAMANATHAN ?/AU  
L2 107 S KATHIRGAMANATHAN P?/AU  
L3 262 S TMHD  
L4 1 S L2 AND L3  
  
FILE 'REGISTRY'  
L5 1 S 15492-51-0  
L6 10135 S 3189/RID  
L7 1088 S L6 AND EU/ELS  
E TRIS (DIPIVALOYLMETHANATO) EUROPIUM/CN  
L8 1 S E3  
  
FILE 'HCAPLUS'  
L9 541 S L8  
L10 93700 S (ELECTROLUM!N? OR ORGANOLUM!N? OR (ELECTRO OR ORGANO OR  
L11 9 S L9 AND L10  
  
FILE 'HCAPLUS'  
L12 18 S L2 AND (EU OR EUROPIUM#)  
L13 2813 S ?HEPTANEDION?  
L14 2 S L12 AND (L13 OR L3)  
  
FILE 'LREGISTRY'  
L15 STR 15522-71-1  
  
FILE 'REGISTRY'  
L16 0 S L15  
  
FILE 'LREGISTRY'  
L17 STR L15  
  
FILE 'HCAPLUS'  
L18 3 S (EU OR EUROPIUM#) (2A) TMHD  
  
FILE 'REGISTRY'  
L19 10 S L17

L20 254 S L17 FUL  
           SAV L20 TH0897/A  
 L21       STR L17  
 L22       2 S L21 SSS FUL SUB=L20

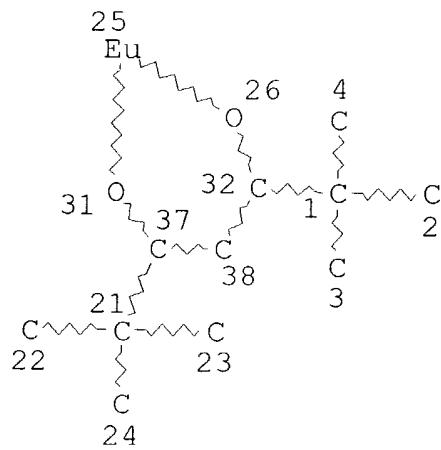
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 L24       144 S TMHD(W)2  
           SEL L24 142 RN

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 L26       2 S L25 AND CU/ELS  
 L27       STR L21  
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 L29       1 S L27 SSS FUL SUB=L20  
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FILE 'HCAPLUS'  
 L30       2 S L29  
 L31       1 S L23 NOT L30  
 L32       3 S L23 OR L30

FILE 'REGISTRY'

=> d 129 que stat  
 L17       STR



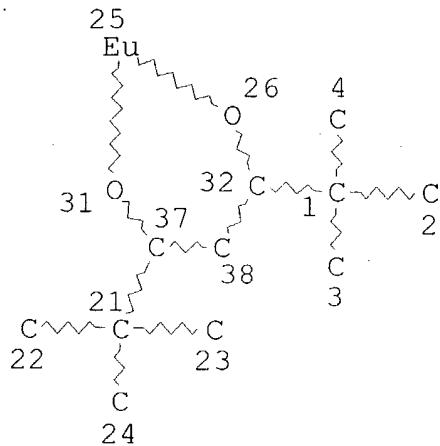
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 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L20 254 SEA FILE=REGISTRY SSS FUL L17  
L27 STR



NODE ATTRIBUTES:

CONNECT IS E4 RC AT 25  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L29 1 SEA FILE=REGISTRY SUB=L20 SSS FUL L27

100.0% PROCESSED 254 ITERATIONS  
SEARCH TIME: 00.00.01

1 ANSWERS

=> file hcaplus  
FILE 'HCAPLUS'  
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=> d 132 1-3 ibib abs hitstr hitrn

L32 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2000:314793 HCAPLUS  
 DOCUMENT NUMBER: 132:354581  
 TITLE: Electroluminescent materials  
 INVENTOR(S): Kathirgamanathan, Poopathy  
 PATENT ASSIGNEE(S): South Bank University Enterprises Ltd., UK  
 SOURCE: PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2000026323	A1	20000511	WO 1999-GB3619	199911 02
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1131388	A1	20010912	EP 1999-954123	199911 02
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI	BR 9915252	A	20011204	BR 1999-15252
JP 2002528633	T2	20020903	JP 2000-579697	199911 02
AU 754481	B2	20021114	AU 2000-10562	199911 02
PRIORITY APPLN. INFO.:			GB 1998-23761	A
				199811 02
			WO 1999-GB3619	W
				199911

02

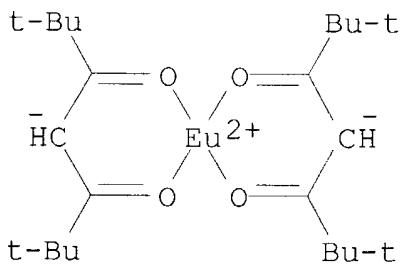
OTHER SOURCE(S): MARPAT 132:354581

AB Photoluminescent compds. comprising an org. complex of a transition metal, a lanthanide or an actinide with an org. ligand and electroluminescent compds. comprising an org. complexes of lanthanides or actinides with org. ligands are described which emit light in the blue or purplish-blue regions of the spectrum. Electroluminescent devices employing the compds. are also described.

IT 117725-54-9P

(electroluminescent and photoluminescent materials based on metal complexes and devices using them)

RN 117725-54-9 HCAPLUS

CN Europium, bis(2,2,6,6-tetramethyl-3,5-heptanedionato- $\kappa$ O, $\kappa$ O')-, (T-4)- (9CI) (CA INDEX NAME)

IT 117725-54-9P

(electroluminescent and photoluminescent materials based on metal complexes and devices using them)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:714541 HCAPLUS

DOCUMENT NUMBER: 121:314541

TITLE: Synthesis and X-ray Structure of the First Divalent Lanthanide Acetylacetone Complex, Bis(2,2,6,6-tetramethylheptane-3,5-dionato)bis(dimethoxyethane)europium(II)

AUTHOR(S): Evans, William J.; Shreeve, Julie L.; Ziller, Joseph W.

CORPORATE SOURCE: Department of Chemistry, University of California, Irvine, CA, 92717, USA

SOURCE: Inorganic Chemistry (1994), 33(26), 6435-7  
CODEN: INOCAJ; ISSN: 0020-1669

PUBLISHER: American Chemical Society

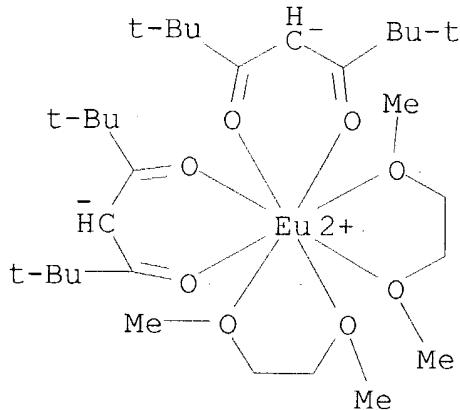
DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB (THD)2Eu(DME)2 (1) was isolated when dimethoxyethane (DME) is added to the product of the reaction of EuI2(THF)2 with 2 equiv of K(THD) (THD = 2,2,6,6-tetramethylheptane-3,5-dionate) in THF. (THD)2Sm(DME)2 (2) was prepd. analogously from SmI2(THF)2. Dark purple 2 decomps. over a two week period in soln. to form colorless (THD)3Sm(DME) (3). Both 1 and 3 contain eight coordinate metal centers. 1 Crystallizes in the monoclinic space group P21/c with a 10.4491(11), b 23.096(3), c 14.499(2) Å,  $\beta$  95.188(9)° and  $d_c$  = 1.332 Mg/m-3 for  $Z$  = 4. Least squares refinement of the model based on 3953 reflections ( $|F_0| > 3.0\sigma(|F_0|)$ ) converged to a final  $R$  = 3.7%. 3 Crystallizes in the triclinic space group P.hivin.1 with a 10.693(2) Å, b 13.459(3) Å, c 16.004(3) Å,  $\alpha$  71.332(14),  $\beta$  75.691(14),  $\gamma$  77.211(15)° and  $d_c$  = 1.256 Mg/m-3 for  $Z$  = 2. Least squares refinement of the model based on 5249 reflections ( $|F_0| > 4.0\sigma(|F_0|)$ ) converged to a final  $R$  = 3.3%.

IT 159121-81-OP  
 (prepn. and crystal structure of)

RN 159121-81-0 HCAPLUS

CN Europium, bis(1,2-dimethoxyethane-O,O')bis(2,2,6,6-tetramethyl-3,5-heptanedionato-O,O')- (9CI) (CA INDEX NAME)



IT 159121-81-OP  
 (prepn. and crystal structure of)

L32 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1988:633648 HCAPLUS

DOCUMENT NUMBER: 109:233648

TITLE: Manufacture of europium complexes

INVENTOR(S): Okada, Atsunori; Wada, Seigo; Shiokawa, Jiro;